

## **REMARKS**

### **I. Status of the Claims**

Claims 1-38 are pending in this application. The Office objected to claim 3 due to its repetition of "wherein." That minor typographical error has been corrected, as well as other minor errors in claims 10 and 14. Applicant has not introduced any new matter by those amendments. Further, the amendments do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner. Applicant respectfully requests that the claim amendments be entered and presents the following arguments regarding the patentability of those claims.

### **II. Amendment to the Specification**

The Office objected to the use of "arm" as united in the abstract. Accordingly, the abstract has been deleted and replaced with a new version to correct that minor typographical error in third sentence, substituting "μm" for "arm." Applicant respectfully requests that the amendment be entered without objection.

### **III. Rejections Under 35 U.S.C. § 102(b)**

#### **A. Rejection of Claims 1-6, 13-18, 27, and 37 over Slepety's**

The Office rejected claims 1-6, 13-18, 27, and 37 as allegedly anticipated by U.S. Patent No. 5,393,340 to Slepety's et al. ("Slepety's"). According to the Office, Slepety's anticipates claims 1 and 6 because it teaches "a calcined kaolin pigment in which 60-85% by weight of it has a particle size of less than 1 micron, and its solid content is from 20% to 70% by weight." Office Action at page 2. The Office further alleged that claims

2-5 are anticipated because Slepety's discloses "that between 60%-85%, preferably between 64%-82% of the particles have particle sizes of less than 1 micron" and that "the prior art discloses that between 80%-98%, preferably between 88%-98% of the particles have a particle size of less than 2 microns." *Id.* at 3. The Office also rejected claims 13-18, asserting that Slepety's teaches "the employing of clay dispersants such as polyacrylate in the clay material in an amount of 0.20% to 0.40% based on the weight of the clay." *Id.* Further, claim 27 was rejected by the Office because the reference supposedly "teaches that the grinding is done via 'wet grinding' process" and "the clay is ground to produce mechanically delaminated pigment grades." *Id.* Finally, the Office rejected claim 37 over Slepety's, alleging that it "discloses the use of calcined kaolin clay in paints" and teaches "calcined kaolin slurry with the properties as specified in claim 1." *Id.* Applicant respectfully traverses those rejections.

To establish anticipation under 35 U.S.C. § 102(b), a single reference must either expressly or inherently teach each and every limitation of the pending claims. *See* MPEP § 2131. Further, a rejection under § 102 is proper only when the claimed subject matter is identically described or disclosed in the prior art. *In re Arkley*, 455 F.2d 586, 587 (C.C.P.A. 1972). Applicant submits that those criteria have not been met here with respect to the present claims.

The instant claims are directed to large-particle calcined kaolin slurries, whereas Slepety's discloses a "fine calcined pigment product" (column 3, lines 14-15). The Office Action itself points out that Slepety's teaches a product in which 60-85% by weight, and preferably 64-82%, of kaolin has a particle size of less than 1 micron. In contrast, independent claim 1 recites a composition wherein at least about 40% by weight of

kaolin has a particle size of at least about 1 micron. Those particle size ranges are clearly mutually exclusive—60-85% of particles less than 1 micron is not within at least 40% of particles having a particle size of at least about 1 micron. Dependent claims 2-4, 6, 13-18 and 27, as well as independent claim 37, include *inter alia* the particle-size limitation of claim 1. Also, claim 5 is directed to a composition wherein at least about 40% by weight of the calcined kaolin has a particle size of at least about 2  $\mu\text{m}$ ; in comparison, Slepety's discloses a kaolin particle size distribution of 80-98%, and preferably 88-98%, less than 2 microns—which is again exclusive of the range recited in claim 5. Slepety's does not disclose the particle size distributions of the present claims and, for at least that reason, the reference cannot anticipate.

**B. Rejection of Claims 1-6, 29-30, and 35-36 over Chen**

The Office has rejected claims 1-6, 29-30, and 35-36 as allegedly anticipated by U.S. Patent No. 6,150,289 to Chen *et al.* ("Chen"). The Office argued that, with respect to claims 1-6, Chen discloses an "aqueous slurry of calcined kaolin clay used in coating composition which contains about 30% to 70% by weight of solids, and about 80% by weight [of] the calcined kaolin has an equivalent spherical diameter . . . less than 1  $\mu\text{m}$ ." Office Action at page 4. The Office further asserted that Chen anticipates claims 29 and 36, as it allegedly discloses "treating calcined kaolin clay so to obtain a particle size distribution such that about 80% by weight of the particles have an esd less than 1 $\mu\text{m}$ ." *Id.* The Office also rejected claim 30, arguing that Chen discloses that "a cationic polymer is used as a dispersant in the aqueous slurry containing kaolin clay" and that "the calcined kaolin is treated with cationic polymer prior to mixing with water." *Id.* Finally, the Office asserted that Chen allegedly anticipates claim 35 because it discloses

"that through the process, which results in the desired clay particle size, a dry grinding process in a conventional ball mill is done as well." *Id.* Applicant respectfully traverses.

The rejected claims recite a slurry wherein, *inter alia*, at least 40% by weight of the calcined kaolin has a particle size of at least about 1  $\mu\text{m}$ . Chen, as pointed out by the Office, appears to disclose kaolin with about 80% by weight having an esd of less than 1  $\mu\text{m}$ . By implication, only about 20% of the kaolin taught by Chen has an esd of at least 1  $\mu\text{m}$ . Therefore, similar to Slepety's, Chen's kaolin esd ranges are mutually exclusive of the ranges recited in the pending claims. For at least that reason, Chen cannot anticipate claims 1-6, 29-30, and 35-36 and the rejection should be withdrawn.

#### **IV. Rejections Under 35 U.S.C. § 103(a)**

The Office rejected claims 7-9, 11-14, 16-22, and 38 as obvious over Slepety's in view of U.S. Application Pub. No. 2003/0177952 to Cummings et al. ("Cummings"). The Office also rejected claims 7-9 and 10-12 as obvious over Slepety's in view of U.S. Patent No. 5,028,268 to Ince et al. ("Ince"). Claim 23-25 were rejected as obvious over Slepety's in view of U.S. Application Pub. No. 2003/0141224 to Pruett et al. ("Pruett"). The Office further rejected claim 19, asserting that it is obvious over Slepety's in view of U.S. Patent No. 5,282,898 to Wu ("Wu"). The Office additionally based an obviousness rejection of claim 34 on Chen in view of Slepety's. Claim 28 was rejected as allegedly obvious over Slepety's in view of U.S. Patent No. 3,309,214 to Joseph et al. ("Joseph"). Finally, the Office rejected claims 30-33 as allegedly obvious over Chen in view of U.S. Patent No. 5,320,897 to Kondo et al. ("Kondo"). Applicant respectfully traverses each of the Examiner's rejections under 35 U.S.C. § 103(a).

To establish a *prima facie* case of obviousness, the Office must establish that each and every element of the claim is taught or suggested and that the skilled artisan would have been motivated to modify or to combine the references with a reasonable expectation of success. See MPEP § 2143. In the present case, the Office has failed to establish a *prima facie* case of obviousness for at least the reasons that neither of the primary references—Slepetysh and Chen—teaches or suggests at least the particle size distribution of the pending claims, as discussed above. None of the secondary references—Cummings, Ince, Wu, Joseph, or Kondo—remedy that deficiency. Therefore, even if the skilled artisan would have been motivated to combine the cited references as suggested by the Office, that result still would not have achieved the subject matter of the pending claims. And the Office has not shown that the skilled artisan would have been motivated to further modify that combination of references to achieve at least the claimed particle size distributions, at least not with any reasonable expectation of success. Therefore, the Office has not established a proper *prima facie* case of obviousness and Applicant respectfully requests that the rejection under 35 U.S.C. § 103(a) be withdrawn.

## **V. Conclusion**

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration of this application and the timely allowance of the pending claims. Should the Office have any questions about this paper or wish to discuss this application, Applicant invites the Office to contact the undersigned representative.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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